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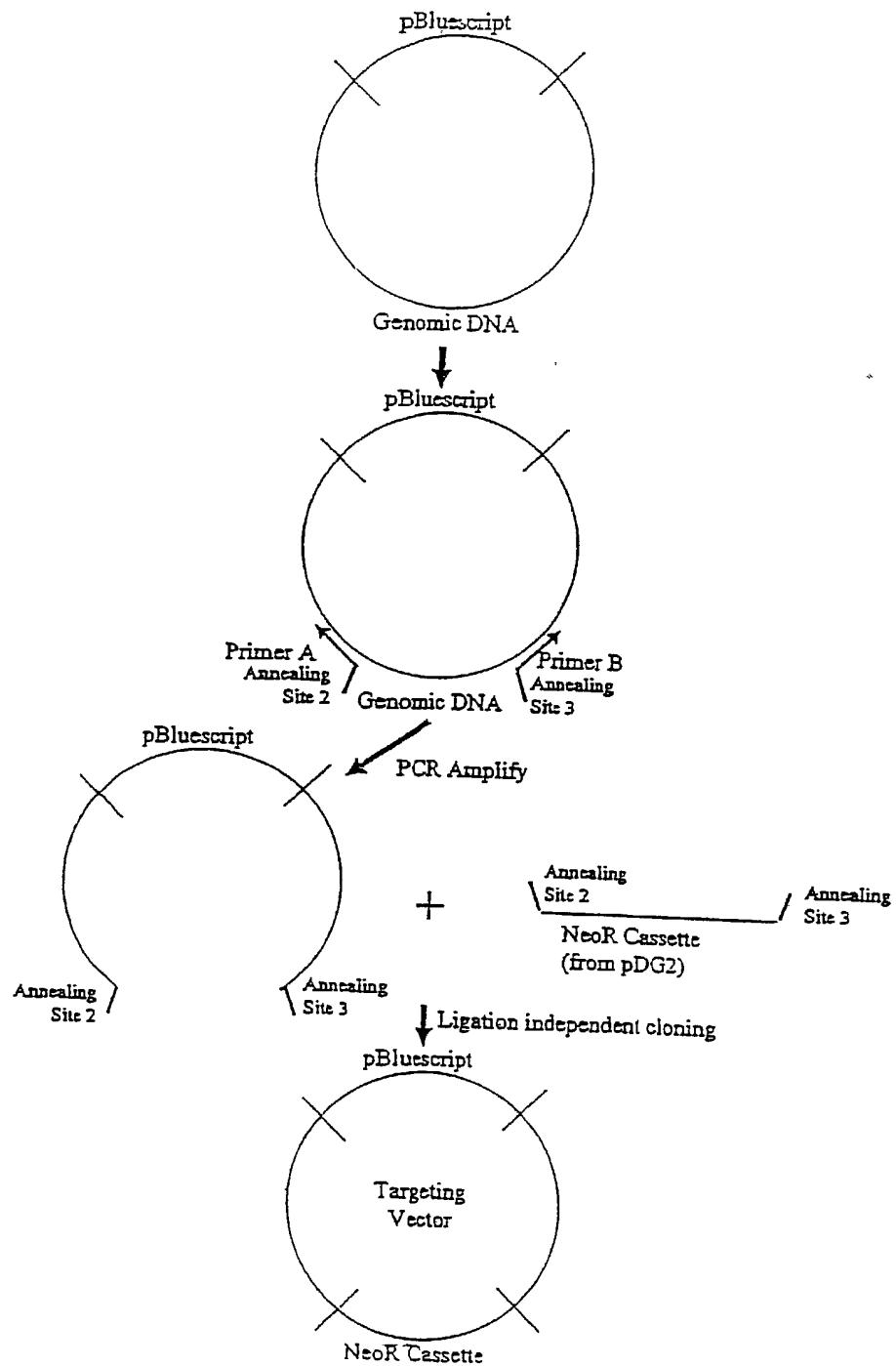


FIGURE 1

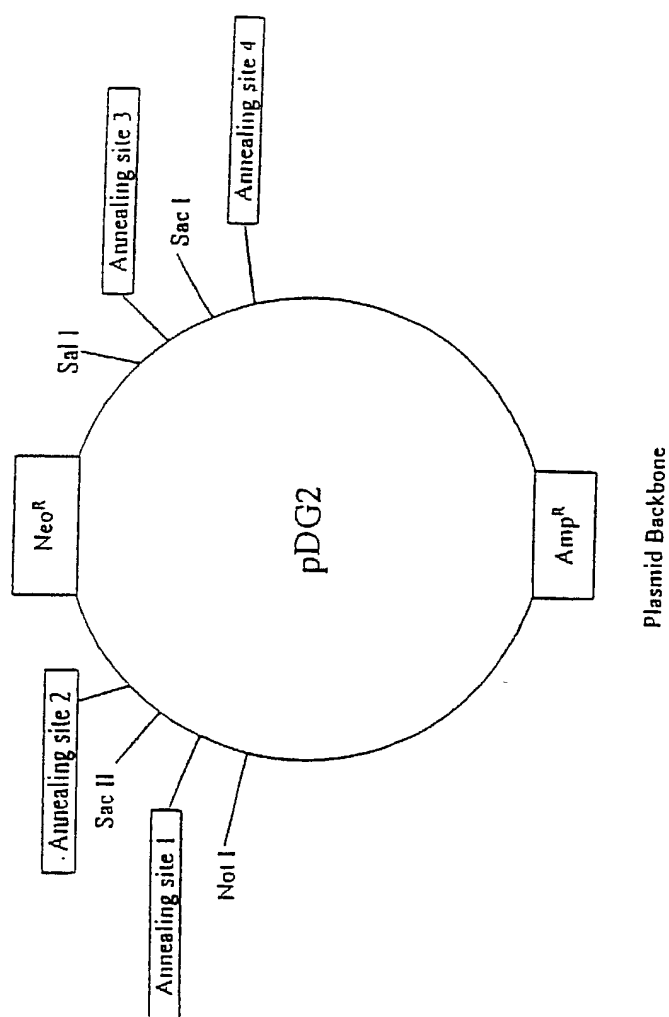


FIGURE 2A

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GTTAACTACG TCAGGTGGCA CTTTTCGGGG AAATGTGCGC GGAACCCCTA TTTGTTTATT TTTCTAAATA CATTCAAATA
 TGTATCCGCT CATGAGACAA TAACCCGTGAT AAATGCTTCA ATAATATTGA AAAAGGAAGA GTATGAGTAT TCAACATTTT
 CGTGTGCGCC TTATTCCTTT TTTTTCGGCA TTTTGCCTTC CTGTTTTTGC TCACCCAGAA ACCTGCTGTA AAGTAAAGAA
 TGCTGAAGAT CAGTTGGGTG CACGAGTGGG TTACATCGAA CTGGATCTCA ACAGCGGTAA GATCCTTGAG AGTTTTTCGCC
 CCGAAGAACG TTCTCCAATG ATGAGCACTT TTAAGTTTCT GCTATGTGGC GCGGTATTAT CCGGTGTTGA CCGCGGGCAA
 GAGCAACTCG GTCCGCCGAT ACATCTATTCT CAGAATGACT TGGTTGAGTA CTCACCACTG ACAGAAAAGC ATCTTACCGA
 TGGCATGACA GTAAGAGAAT TATGCAGTGC TGCCATAACC ATGAGTGATA AACTGCGGC CAACTTACTT CTGACAACGA
 TCGGAGGACC GAAGGAGCTA ACCGCTTTTT TGCAACAACAT GGGGATCAT GTAACCTGCC TTGATCGTTG GGAACCGGAG
 CTGAATGAAG CCATACCAAA CGACGAGCGT GACACCACGA TGCTGTAGC AATGGCAACA ACCTTGCACA AACTATTAA
 TGGCGAATA CTACTCTAG CTTCCCGGCA ACAATTAATA GACTGGATGG AGGCGGATAA AGTTGCAGGA CCCTTCTGCG
 GCTCGGCCCT TCCGGCTGGC TGGTTTTATT CTGATAAATC TGACAAACAT GGGGATCAT GTAACCTGCC TTGATCGTTG GGAACCGGAG
 CTGGGGCCAG ATGGTAAGCC CTCCCGTATC GTAGTTATCT ACACGACGGG GAGTCAGGCA ACTATGGATG AACGAAATAG
 ACAGATCGCT GAGATAGGTG CCTCACTGAT TAAGCATTGG TAACGTGTAG ACCAAGTTTA CTCATATATA CTTTAGATTG
 ATTTACCCCG GTTGATAATC AGAAAAGCCC CAAAAACAGG AAGATTGTAT AAGCAAAATAT TTAATTTGTA AACGTTAATA
 TTTTGTAAAT ATTCGGCTTA AATTTTTGTT AAATCAGCTC ATTTTTTAAAC CAATAGCCCG AAATCGGCAA AATCCCTTAT
 AAATCAAAAG AATAGCCCGA GATAGGGTTG AGTGTGTGTC CAGTTTGGAA CAAGAGTCCA CTATTAAAGA ACGTGGAGCT
 CAACGTCAAA GGGCGAAAAA CCGTCTATCA GGGCGATGGC CCATACGTG AACCATCACC CAAATCAAGT TTTTGGGGT
 CGAGGTGCGC TAAAGCACTA AATCGGAACC CTAAGGGAG CCCCCGATT AGAGCTTGAC GGGGAAAGCG AACGTGGCGA
 GAAAGGAAGG GAAGAAAGCG AAAGGAGCGG GCGCTAGGGC GCTGGCAAGT GTAGCGGTCA CCGCTGCGCT AACCCACACA
 CCGCGCGCGC TTAATGCGCC GCTACAGGGC GCGTAAAAGG ATCTAGGTGA AGATCCTTTT TGATAATCTC ATGACCAAAA
 TCCCTTAAAG TGAGTTTTG TTTCACTGAG CGTCAGACCC CGTAGAAAAG ATCAAAGGAT CTTCTTGAGA TCCTTTTTTT
 CTGCGCGTAA TCTGCTGCTT GCAAAACAAA AAACCACCGC TACCAGCGGT GGTTTGTTTG CCGGATCAAG AGCTACCAAC
 TCTTTTTCCG AAGGTAACCTG GCTTCAGCAG AGCGCAGATA CCAATACCTG TTTCTTAGT GTAGCCGCTAG TTAGGCCAGT
 ACTTCAAGAA CTCTGTAGCA CCGCTACAT ACCTCGCTCT GCTAATCTG TTACCACTGG CTGCTGCGAG TGGCGATAAG
 TCGTGTCTTA CCGGGTTGGA CTCAGACGA TAGTTACCGG ATAAGGCGCA GCGGTGCGGC TGAACGGGGG GTTCGTGCAC
 ACAGCCGAGC TTGGAGCGAA CGACCTACAC CGAAGTGA TAACCTACAGC GTGAGCTATG AGAAAGCGCC AGCTTCCCG
 AAGGGAGAAA GCGCGACAGG TATCCGGTAA GCGGCAGGGT CGGAACAGGA GAGCGCACGA GAGCGGTTC AGCCACACA
 GCTGTGTATC TTTATAGTCC TGTGCGGTTT CGCCACCTCT GACTTGAGCG TCGATTTTT TGATGCTCGT CAGGGGGGGG
 GAGCCTATGG AAAAACGCCA GCAACGCGGC CTTTTACGG TTTCTGGCTC TTTGCTGGCC TTTTGCTCAC ATGTAATGTG
 AGTTAGCTCA CTCATTAGGC ACCCCAGGCT TTACACTTTA TGCTTCGGCT TCGTATGTTG TGTGGAATTG TGAGCGGATA
 ACAAATTTAC ACAGGAAACA GCTATGACCA TGATTACGCC AAGCTACGTA ATACGACTCA CTAGCGCGCC GCGTTTAAAC
 AATGTGCTCC TCTTTGGCTT GCTTCCGCGG GCCAAGCCAG AACAAGACCA GTTGACGTGA AGCTTCCCGG GACGCGTGCT
 AGCGGCGCGC CGAATTCTCG CAGGATTCGA GGGCCCCGCT AGGTCAATT TACCGGTAG GGGAGGCGCT TTTCCCAAGG
 CAGTCTGGAG CATGCGCTTT AGCAGCCCCG CTGGCACTTG GCGCTACACA AGTGGCCTCT GGCCTCGCAC ACATTCACCA
 TCCACCGSTA GCGCCAACCG GCTCCGTCT TTTGGTGGCC CTTCCGCGCA CTTCTACTC TCCTCTAGT CAGGAAGTTT
 CCCCCGCGCC CGCAGCTCGC GTCGTGACAG ACCTGACAAA TGGAAAGTAGC ACCTCTACT AGTCTCTGTC AGATGGACAG
 CACCGCTGAG CAATGGAAGC GGTAGGCTT TTTGGGCGC GGCCTATAGC AGCTTGTCT CTTCTGCTTC TGGGCTCAGA
 GGCTGGGAAG GGGTGGGTCC GGGGGCGGGC GCTCAGGGGG GGGGCGGGG CGAAGGTCTT CCGGAGGCCC
 GGCATTCTCG CACGCTTCAA AAGCGCACGT CTGCGCGCT GTTCTCTCT TCCTCATCTC CGGGCCTTTC GACCTGCAGC
 CAATATGGGA TCGGCCATTG AACAAGATGG ATTGCACGCA GGTTCTCGG CCGCTTGGGT GGAGAGGCTA TTCGGCTATG
 ACTGGGCACA ACAGACAATC GGCTGCTCTG ATGCGCGCT GTTCCGGCTG TCAGCGCAGG GGGCGCCGCT TCTTTTTGTC
 AAGACCGACC TGTCCGGTGC CTTGAATGAA CTGCAGGAG AGGCAGCGCG GCTATCGTGG CTGGCCACGA CCGGCGTTCC
 TTGCGCAGCT GTGCTCGACG TTGTCACTGA AGCGGGAAG GACTGGCTGC TATTGGGCGA AGTGGCGGGG CAGGATCTCC
 TGTCATCTCA CTTGTCTCT GCGGAGAAAG TATCCATCAT GGCTGATGCA ATGCGGCGGC TGCATACGCT TGATCGGCT
 ACCTGCCCAT TCGACCACA AGCGAAACAT CGCATCGAGC GAGCAGTAC TCGATGGAA GCGGCTCTTG TCGATCAGGA
 TGATCTGGAC GAAGAGCATC AGGGGCTCGC GCGAGCCGAA CTGTTCCGCA GGCTCAAGGC GCGCATGCCG GACGCGGATG
 ATCTCGTCTG GACCCATGGC GATGCGCTGT TGCCGAATAT CATGGTGGAA AATGGCCGCT TTTCTGGATT CATCGACTGT
 GGCGCGCTGG GTGTGGCGGA CCGCTATCAG GACATAGCGT TGGCTACCG TGATATTGCT GAAGAGCTTG GCGCGGAATG
 GGCTGACCGC TTTCTCGTGC TTTACGGTAT CCGCGCTCCC GATTGCGAGC GCATCGCCTT CTATCGCCTT CTTGACGAGT
 TCTTCTGAGG GGATCGATCC GTCTGTAAAG TCTGCAGAAA TTGATGATCT ATTAACAAT AAAGATGTCC ACTAAATGG
 AAGTTTTTCC TGTCTACTT TGTAAAGAAG GGTGAGAACA GAGTACCTAC ATTTTGAATG GAAGGATTGG AGCTACGGGG
 GTGGGGGTGG GGTGGGATTA GATAAATGCC TGCTCTTAC TGAAGGCTCT TTAATATTG TTTATGATAA TGTTCATAG
 TTGGATATCA TAATTTAAAC AAGCAAAACC AAATTAAGGG CCAGCTCATT CCTCCCACTC ATGATCTATA GATCTATAGA
 TCTCTCGTGG GATCATTGTT TTTCTCTTGA TTCCCACTTT GTGGTTCTAA GTACTGTGGT TTCCAAATGT GTCAGTTTCA
 TAGCCTGAAG AACGAGATCA GCAGCCTCTG TTCCACATAC ACTTCATTCT CAGTATTGTT TTGCCAAGTT CTAATTCATG
 CAGAAGCTGA CTCTAGATCT GGATCCGGCC AGCTAGGCC TCGACCTCGA GTGATCAGGT ACCAAGGTC TCGCTCTGTG
 TCCGTTGAGC TCGACGACAC AGGACACGCA AATTAATTA GGGCGGCCCC TACCCTCTAG TCAAGGCTT AAGTGAGTGC
 TATTACGGAC TGGCGCTCGT TTTACAAAGT CGTGACTGGG AAAACCCCTG CGTTACCCAA CTTAATCGCC TTGACGACA
 TCCCTCTTTC GCGAGCTGGC GTAATAGCGA AGAGGCCCCG ACCGATCGCC CTTCCCAACA GTTGCGCAGC CTGAATGGCG
 AATGCGCTT CGCTTGGTAA TAAAGCCCGC TTCGGCGGGC TTTTTTTT;

FIGURE 2B

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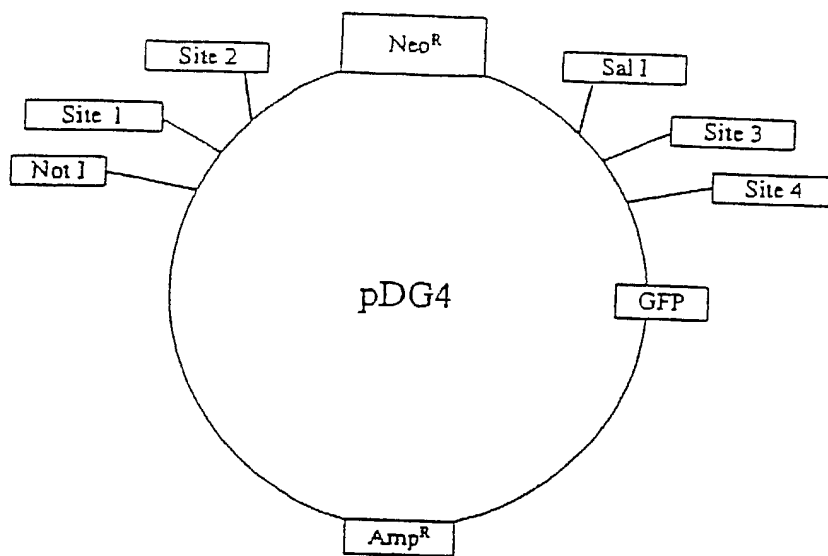


FIGURE 3A

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GTTTAATAGT AATCAATTAC GGGGTCAATTA GTTCATAGCC CATATATGGA GTTCCGCGTT ACATAACTTA CGGTAAATGG
 CCCGCCCTGGC TGACCGCCCA ACGACCCCGG CCCATTGACG TCAATAATGA CGTATGTTCC CATAGTAACG CCAATAGGGA
 CTTTCCAATG ACGTCAATGG GTGGAGTATT TACGGTAAAC TGCCCACTTG GCAGTACATC AAGTGTATCA TATGCCAAGT
 ACGCCCCCTA TTGACGTCAA TGACGGAAAA TGCCCGCGCT GGCATTAAAG CCAGTACATG ACCTTATGGG ACTTTCCTAC
 TTGGCAGTAC ATCTACGTAT TAGTCATCGC TATTACCATG GTGATGCGGT TTTGGCAGTA CATCAATGGG CGTGGATAGC
 GGTTTGACTC ACGGGGATTT CCAAGTCTCC ACCCCATTGA CGTCAATGGG AGTTTGTITT GGCACCAAAA TCAACGGGAC
 TTTCCAAAAA GTCTGAACAA CTCGCCCCCA TTGACGCAAA TGGGCGGTAG GCGGTACAGG TGGGAGGTCT ATATAAGCAG
 AGCTGGTTTA GTGAACCGTC AGATCCGCTA TGCGTACCGG TCGCCACCAT GGTGAGCAAG GCGGAGGAGC TGTTACCCGG
 GGTGGTGCCT ATCTGTGTCG AGCTGGACGG CGACGTAAAC GGCCACAAAG TCAGCGTGTG CCGCGAGGGC GAGGGCGATG
 CCACCTACGG CAAGCTGACC CTGAAGTTCA TCTGCACCAC CGGCAAGCTG CCGGTGCCCT GGCCACCCCT CGTGACCACT
 CTGACCTACG GCGTGCAGTG CTTGAGCCGC TACCCTGACC ACATGAAGCA GCACGACTTC TTCAAGTCCG CCATGCCCGA
 AGGCTACGTC CAGGAGCGCA CCATCTTCTT CAAGGACGAC GGCAACTACA AGACCCGCGC CGAGGTGAAG TTGAGGGGCG
 ACACCCCTGGT GAACCGCATC GAGCTGAAGG GCATCGACTT CAAGGAGGAC GGCAACATCC TGGGGCACAA GCTGGAGTAC
 AACTACAACA GCCACAACGT CTATATCATG GCCGACAAGC AGAAGAACGG CATCAAGGTG AACTTCAAGA TCCGCCACAA
 CATCGAGGAC GGCAGCGTGC AGCTCGCCGA CCACTACCAG CAGAACACCC CCATCGGCGA CGGCCCGCTG CTGCTGCCCG
 ACAACCACTA CCTGAGGACC CAGTCCGCCC TGAGCAAGA AGCGCGGATC ACATGCTCTG CATGAGTCTT CAGGAGTTTC
 GTGACCGCGC CCGGGATCAC TCTCGGCATG GACGAGCTGT ACAAGTCCGG ACTCAGATCC ACCGGATCTA GATAACTGAT
 CATATACAGC CATACCATAT TTGTAGAGGT TTTACTTGCT TTAATAAACC TCCACACCTT CCCCCTGAAC CTGAAACATA
 AAATGAATGC AATTGTTGTT GTTAACTTGT TTATTGCAGC TTATAATGGT TACAAATAAA GCAATAGCAT CAGAAATTTT
 ACAATAAAGC CATTTTTTTC ACTGCATTCT AGTTGTGGTT TGTCCAAACT CATCAATGTA TCTTAACGCG AACTACGTCA
 GGTGGCACTT TTCGGGGAAA TGTGCGCGGA ACCCTATTTT GTTTATTTTT CTAAATACAT TCAATATATG ATCCGCTCAT
 GAGACAATAA CCCTGATAAA TGCTTCAATA ATATTGAAAA AGGAAGAGTA TGAGTATTCA ACATTTCCGT GTCGCCCTTA
 TTCCTTTTTT TGCGGCATTT TGCTTCTCTG TTTTGTCTCA CCCAGAAACG CTGGTGAAAG TAAAGATGTC TGAAGATCAG
 TTGGGTGCAC GAGTGGGTTA CATCGAACTG GATCTCAACA GCGGTAAAGT CCTTGAGAGT TTTCCGCCCG AAGAACGTTT
 TCCAATGATG AGCACTTTTA AAGTTCTGCT ATGTGCGCGG GTATTATCCC GTGTGACGCG CCGGCAAGAG CAACTCGGTC
 GCGGCATACA CTATTCTCAG AATGACTTGG TTGAGTACTC ACCAGTCACA GAAAGCATC TTAACGATCG CATGACAGTA
 AGAGAATTAT GCAGTGCTGC CATAACCATG AGTGATAACA CTGCGGCCAA CTACTTCTG ACAACGATCG GAGGACCGAA
 GGAGCTAAAC GCTTTTTTGC ACAACATGGG GGATCATGTA ACTCGCCTTG ATCGTTGGGA ACCCGAGCTG AATGAAGCCA
 TACCAAAACG CGAGCGTGAC ACCAGATGTC CTGTAGCAAT GGCAACAACG TTGCGCAACG TATTAACTGG CGAACTACTT
 ACTCTAGCTT CCCGGCAACA ATTAATAGAC TGGATGGAGG CGGATAAAGT TGCAGGACCA CTTCTGCGCT CGGCCCTTCC
 GGCTGGCTGG TTTATTGCTG ATAAATCTGG AGCCGGTGAG CGTGGGTCTC GCGGTATCAT TGCAGCCTG GGGCCAGATG
 GTAAGCCCTC CCGTATCGTA GTTATCTACA CGACGGGGAG TCAGGCAACT ATGGATGAAC GAAATAGACA GATCGCTGAG
 ATAGGTGCCT CACTGATTAA GCATTGGTAA CTGTGAGACC AAGTTTACTC ATATATACCT TAGATTGATT TACCCCGGTT
 GATAATCAGA AAAGCCCCAA AACAGGAAG ATTGTATAAG CAAATATTTA AATTGTAAAC GTTAATAATT TGTAAAAATT
 CGCGTTAAAT TTTTGTAAAA TCAGCTCATT TTTTAAACAA TAGGCCGAAA TCGGCAAAAT CCGTTATAAA TCAAAAGAAAT
 AGCCCGAGAT AGGGTTGAGT GTTGTTCGAG TTTGGAACAA GAGTCCACTA TTAAGAAACG TGGACTCCAA CGTCAAAGGG
 CGAAAAACCG TCTATCAGGG CGATGGCCCA CTACGTGAAC CATCACCCAA ATCAAGTTTT TTGGGGTCTGA GGTGCCGTAA
 AGCACTAAAT CGGAACCCCTA AAGGGAGCCC CCGATTTAGA GCTTGACGGG GAAAGCGAAC GTGGCGAGAA AGGAAGGGAA
 GAAAGCGAAA GGAGCGGGCG CTAGGGCGCT GGCAAGTGTA GCGGTACGCG TGCGCGTAAC CACCACACCC GCCGCGCTTA
 ATGCGCGCGT ACAGGGCGCG TAAAAGGATC TAGGTGAAGA TCCTTTTTGA TAATCTCATG ACCAAATCC CTTAACGTGA
 GTTTTCGTTT CACTGAGCGT CAGACCCCGT AGAAAAGATC AAAGGATCTT CTTGAGATCC TTTTTCCTG CGCGTAATCT
 GGTGCTTGCA AACAAAAAAA CCACCGCTAC CAGCGGTGGT TTGTTTCCCG GATCAAGAGC TACCAACTCT TTTTCCGAAG
 GTAACCTGGT TCAGCAGAGC GCAGATACCA AATACTGTTT TTCTAGTGTA GCCGTAGTTA GGCCACCATC TCAAGAACTC
 TGTAGCACCG CCTACATACC TCGCTCTGCT AATCCTGTTA CCAGTGGCTG CTGCCAGTGG CGATAAGTCG TGTCTTACCG
 GGTTGGACTC AAGACGATAG TTACCGGATA AGGCGCAGCG GTCCGGCTGA ACGGGGGGTT CGTGACACCA GCCCAGCTTG
 GAGCGAACGA CCTACACCGA ACTGAGATAC CTACAGCGTG AGCTATGAGA AAGCGCCACG CTTCCCGAAG GGAGAAAGGC
 GGACAGGTAT CCGGTAAAGC GCAGGGTCTG AACAGGAGAG CGCACGAGGG AGCTTCCAGG GGGAAACGCC TGTGATCTTT
 ATAGTCTCTG CCGGTTTTCGC CACCTCTGAC TTGAGCGTGC ATTTTGTGTA TGCTCGTCAG GGGGGCGGAG CCTATGGAAA
 AACGCCAGCA ACGCGGCCTT TTTACGGTTC CTGGCCTTTT GCTGGCCTTT TGCTCACATG TAATGTGAGT TAGCTCACTC
 ATTAGGCACC CCAGGCTTTA CACTTTATGC TTCCGGCTCC TATGTTGTGT GGAATTGTGA GCGGATAACA ATTTACACAC
 GGAAACAGCT ATGACCATGA TTACGCCAAG CTACGTAATA CGACTCACTA GCGGCGCCGG TTTAAACAAAT GTGCTCTCTT
 TTGGCTTGCT TCCGCGGGCC AAGCCAGACA AGAACCAAGT GACGTCAAGC TTCCCGGGAC GCGTGCTAGC GCGCGCCGAT
 ATTCTGTCAG GATTGAGGG CCCCTGCAGG TCAATTCTAC CCGGTAGGGG AGGCGCTTTT CCCAAGGCAT TCTGGAGCAT
 GCGCTTTAGC AGCCCGCGTG GCACTTGGCG CTACACAAGT GGCCTCTGGC CTCGCACACA TTCCACATCC ACCGGTAGCG
 CCAACCGGCT CCGTTCTTTG GTGGCCCTTT CGCGCCACCT TCTACTCTC CCCTAGTCAG GAAGTTCCCC CCCGCCCGC
 AGCTCGCGTC GTGCAGGACG TGACAAATGG AAGTAGCACG TCTCACTAGT CTCGTGCAGA TGGACAGCAC CGCTGAGCAA
 TGGAGCGGG TAGGCCCTTG GGCAGCGGC CAATAGCAGC TTTGCTCTTT CGCTTCTG GCTCAGAGGC TGGGAAGGGG

FIGURE 3B1

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TGGGTCCGGG GCGGGGCTCA GGGGCGGGCT CAGGGGCGGG GCGGGGCGGA AGGTCTCTCC GAGGCCCCGC ATTCTCGCAC
GCTTCAAAAG CGCACGTCTG CCGCGCTGTT CTCCTCTTCC TCATCTCCGG GCCTTTCGAC CTGCAGCCAA TATGGGATCG
GCCATTGAAC AAGATGGATT GCACGCAGGT TCTCCGGCCG CTTGGGTGGA GAGGCTATTG GGCTATGACT GGGCACAAAC
GACAATCGGG TGCTCTGATG CCGCGGTGTT CCGGCTGTCA GCGCAGGGGC GCCCGGTCTT TTTTGTCAAG ACCGACCTGT
CCGGTGCCCT GAATGAATG CAGGACGAGG CAGCGCGGCT ATCGTGGCTG GCCACGACGG GCGTTCCCTG CGCAGCTGTG
CTCGACGTTG TCACTGAAGC GGGAAAGGAC TGGCTGCTAT TGGGCGAAGT GCCGGGGCAG GATCTCCTGT CATCTCACCT
TGCTCCTGCC GAGAAAAGTAT CCATCATGSC TGATGCAATG CGGCGGCTGC ATACGCTTGA TCCGGCTACC TGCCCATTCG
ACCACCAAGC GAAACATCGC ATCGAGCGAG CACGTACTCG GATGGAAGCC GGTCTTGTG ATCAGGATGA TCTGGACGAA
GAGCATCAGG GGCTCGCGCC AGCCGAAGTC TTCGCCAGGC TCAAGGCGCG CATGCCCGAC GGCGATGATC TCGTCGTGAC
CCATGGCGAT GCCTGCTTGC CGAATATCAT GGTGGAAAAT GGGCGCTTTT CTGGATTCTA CGACTGTGGC CGGCTGGGTG
TGGCGGACCG CTATCAGGAC ATAGCGTTGG CTACCCGTGA TATTGCTGAA GAGCTTGGCG GCGAATGGGC TGACCGCTTC
CTCGTGCCTT ACGGTATCGC CGCTCCCGAT TCGCAGCGCA TCGCCTTCTA TCGCCTTCTT GACGAGTTCT TCTGAGGGGA
TCGATCCGTC CTGTAAGTCT GCAGAAATG ATGATCTATT AAACAATAAA GATGTCCACT AAAATGGAAG TTTTCTCTGT
CATACTTTGT TAAGAAGGGT GAGAACAGAG TACCTACATT TTGAATGGAA GGATTGGAGC TACGGGGGTG GGGGTGGGGT
GGGATTAGAT AAATGCCTGC TCTTTACTGA AGGCTCTTTA CTATTGCTTT ATGATAATGT TTCATAGTTG GATATCATAA
TTTAAACAAG CAAACCAAAA TTAAGGGCCA GCTCATTCCT CCCACTCATG ATCTATAGAT CTATAGATCT CTCGTGGGAT
CATTGTTTTT CTCCTTGATTC CCACCTTTGTG GTTCTAAGTA CTGTGGTTTC CAAATGTGTC AGTTTTCATG CCTGAAGAAC
GAGATCAGCA GCCTCTGTTC CACATACACT TCATTCTCAG TATTGTTTTG CCAAGTTCTA ATTCCATCAG AAGCTGACTC
TAGATCTGGA TCCGGCCAGC TAGGCGGTG ACCTCGAGTG ATCAGGTACC AAGGTCTCTG CTCTGTGTCC GTTGAGCTCG
ACGACACAGG ACACGCAAAAT TAATTAAGGC CCGCCCGTAC CCTCTAGTCA AGGCCTTAAG TGAGTCGTAT TACGGACTGG
CCGTGTTTTT ACAACGTCGT GACTGGGAAA ACCCTGGCGT TACCCAACTT AATCGCCTTG CAGCACATCC CCCTTTCGCC
AGCTGGCGTA ATAGCGAAGA GGGCCGCACC GATCGCCCTT CCCAACAGTT GCGCAGCCTG AATGGCGAAT GCGCCTTCG
TTGGTAATAA AGCCCGCTTC GGGGGGCTTT TTTTT

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FIGURE 3B2

| Annealing site | Sequence | Sequence after digestion |
|----------------|--|---|
| 1 | 5' tgtgctcctcttggccttgctccaa... 3' 3' aacgaggagaaacggaacgaaggtt... 5' | 5' tgtgctcctcttggccttgctccaa... 3' 3' tt... 5' |
| 2 | 5' ctgggtctctgtctggccttgccccaa... 3' 3' gaccaagaacagacgaacccgggtt... 5' | 5' ctgggtctctgtctggccttgccccaa... 3' 3' tt... 5' |
| 3 | 5' ggtcctcgctctgtgtccggttgaa... 3' 3' ccaggagcgagacacaggaacctt... 5' | 5' ggtcctcgctctgtgtccggttgaa... 3' 3' tt... 5' |
| 4 | 5' tttagcggtgctctgtgtcgtcgaa... 3' 3' aaacgcacaggacacagcagcgtt... 5' | 5' tttagcggtgctctgtgtcgtcgaa... 3' 3' tt... 5' |

FIGURE 4

| Annealing site | Sequence | Sequence after digestion |
|----------------|---|---|
| 1 | 5' AAtgtgctcctctcttggcttgcttccgcg 3' Ttacacgaggagaaacccgaacgaagg | 5' AA 3' Ttacacgaggagaaacccgaacgaagg |
| 2 | 5' AActggttcttctgtctggcttgccgcg 3' Ttgaccaagaacagaccgaaccggg | 5' AA 3' Ttgaccaagaacagaccgaaccggg |
| 3 | 5' AAggtcctcgctctgtgtccgttgagct 3' Ttccaggagcgagacacacaggcaac | 5' AA 3' Ttccaggagcgagacacacaggcaac |
| 4 | 5' AAtttgcgtgtcctgtgtcgtcagagct 3' Ttaaacgcacaggacacacagcagc | 5' AA 3' Ttaaacgcacaggacacacagcagc |

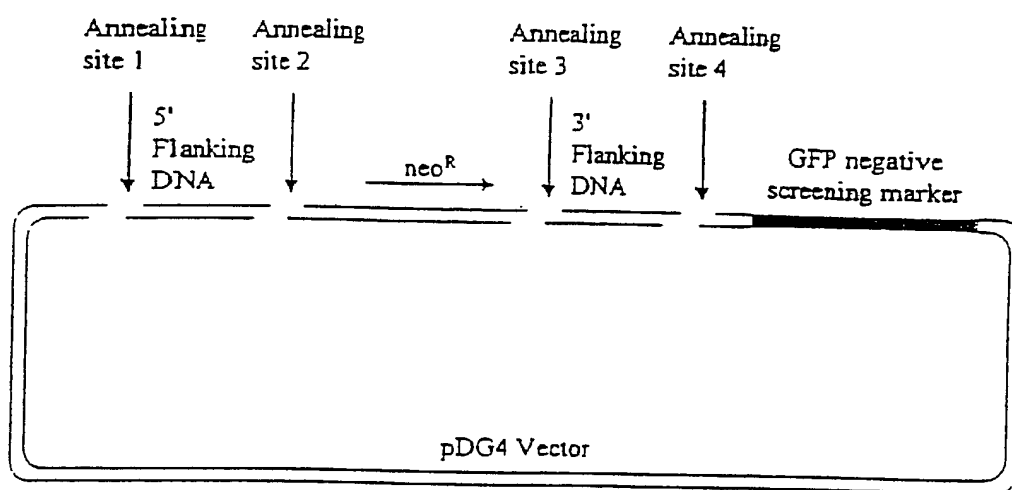
FIGURE 5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

The diagram illustrates the pDG2 Vector, a circular plasmid used for gene targeting. It features four annealing sites labeled 1, 2, 3, and 4. Sites 1 and 2 are located on the 5' flanking DNA, while sites 3 and 4 are on the 3' flanking DNA. An arrow labeled neo^R indicates the location of the neomycin resistance gene between sites 2 and 3. The entire construct is enclosed in a large rectangle labeled "pDG2 Vector".

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FIGURE 7



| Oligo# | Sequence (5' to 3') |
|--------|---|
| 174 | ATGACCGCTCAGGAAACCTGTTGCA |
| 180 | ATAGGCATAGTAGGCCAGCTTGAGG |
| 454 | tgtgctcctcttttggttgccttccAATTAAACCTCACTAAAGGGAACGAAT |
| 463 | ctgggttcttgtctggcttggcccaaTGCAACAGGTTTCCTGAGCGGTCAT |
| 464 | ggtcctcgctctgtgtccgttgaaCCTCAAGCTGGCCTACTATGCCTAT |
| 42 | tttgcgtgtcctgtgtcgtcgaaCGACTAATACGACTCACTATAGGGCG |
| 151 | GCCAATGGACTCTTAGTTTGGGAAC |
| 155 | GTTCTGGCAAACAAATTCGGCGCAC |
| 454 | tgtgctcctcttttggttgccttccAATTAAACCTCACTAAAGGGAACGAAT |
| 465 | ctgggttcttgtctggcttggcccaaGTTCCAAACTAAGAGTCCATTGGC |
| 466 | ggtcctcgctctgtgtccgttgaaGTGCGCCGAATTTGTTTGCCAGAAC |
| 1 | GAACCTTGGTGTGCCAAGTTACTTC |
| 2 | GAACCTTGGCTGAACCCCTTGTTC |
| 41 | tgtgctcctcttttggttgccttgaaCGACTAATACGACTCACTATAGGGCG |
| 38 | ctgggttcttgtctggcttggcccaaGAAGTAACTTGGCACACCAAGGTTTC |
| 40 | ggtcctcgctctgtgtccgttgaaAGAACAAGGGGTTGAGCCAAAGTTC |
| 37 | tttgcgtgtcctgtgtcgtcgAATTAAACCTCACTAAAGGGAACGAAT |
| 540 | ATGCCGGATCTCCTACTACTGGGCC |
| 546 | TGTCATAGTAGACAGCGATGGAACG |
| 445 | GACAAGAACCAGTTGACGTCAAGCTTCCCGGGACGCGTGCTAGCGGCGCGCCG |
| 667 | ctgggttcttgtctggcttggcccaaGGCCCACTAGTAGGAGATCCGGCAT |
| 668 | ggtcctcgctctgtgtccgttgaaCGTTCCATCGCTGTCTACTATGACA |
| 907 | ctgggttcttgtctggcttggcccaaAAAGCCGACAGCCACGCTCACAAGC |
| 908 | ggtcctcgctctgtgtccgttgaaGCCCAATGCCACAGAGACAGAATGT |
| 1157 | ctgggttcttgtctggcttggcccaaGTTGGATCCTCTCCAAGGCCCATCT |
| 1158 | ggtcctcgctctgtgtccgttgaaCTCCAGTGCCGAGTGTGTGGGGACAG |

Figure 8